

What is Claimed

1. A booster actuator for receiving a low energy input and outputting a high energy output to operate a device, the booster comprising:
 - a body having a force receiving input end and force delivery output end;
 - 5 a force input member movable relative to the body in response to the low energy force input from an initial input position to an activated input position;
 - a force output member movable relative to the body in response to movement of the force input member from an initial output position to an activated output position;
 - a biasing member for biasing the force output member to the activated output
 - 10 position; and
 - a linking member between the force input member and the force output member and pivotally movable with respect to the body from an engaged position for retaining the force output member in the initial output position to a disengaged position for releasing the force output member to the activated output position, the linking member having an input end
 - 15 engaging the force input member and an output end engaging the force output member.
2. The booster actuator as defined in claim 1, further comprising:
 - another biasing member for biasing the force input member to the initial input position.
3. The booster actuator as defined in claim 1, wherein the force output member

includes an output member recess for receiving a lower end of the linking member when in the engaged position.

4. The booster actuator as defined in claim 3, wherein the force input member includes an input member recess for receiving an upper end of the linking member when in
5 the disengaged position, thereby allowing disengagement of the lower end of the linking member from the output member recess.

5. The booster actuator as defined in claim 1, wherein at least three linking members each pivotable with respect to the body are circumferentially arranged about the force input member and the force output member.

10 6. The booster actuator as defined in claim 5, wherein four linking members are spaced circumferentially at approximately 90.degree. intervals about the force input member and force output member.

7. The booster actuator as defined in claim 1, further comprising: the biasing member comprises a plurality of disk springs; and another biasing member for biasing the
15 force input member to the initial input position.

8. The booster actuator as defined in claim 1, further comprising:
an electrical coil surrounding the force input member, such that a change in electrical energy to the coil moves the force input member to the activated input position.
9. The booster actuator as defined in claim 1, wherein each of the input end and
5 output end of the linking member is provided with a roller for engaging the force input member and the force output member, respectively.
10. The booster actuator as defined in claim 1, wherein the force delivery output end of the body includes threads, and a reset member threaded to the delivery output end is rotated relative to the body to forceably engage the force output member to move the force
10 output member from the activated position to the initial position.
11. A booster actuator for receiving a low energy force and outputting a high energy force output to operate another device, the booster comprising:
a body having a force receiving input end and force delivery output end;
a force input member linearly movable relative to the body in response to the low
15 energy force input from an initial input position to an activated input position;
a first biasing member for biasing the force input member to the initial input position;
a force output member linearly movable relative to the body in response to movement of the force input member from an initial output position to an activated output position;

a second biasing member for biasing the force output member to the activated output position; and

a linking member between the force input member and the force output member and movable from an engaged position for retaining the force output member in the initial output position to a disengaged position for releasing the force output member to the activated output position.

12. The booster actuator as defined in claim 11, wherein at least three linking members each pivotable with respect to the body are circumferentially arranged about the force input member and the force output member.

10 13. The booster actuator as defined in claim 11, wherein the first biasing member is a coil spring, and the second biasing member comprises a plurality of disk springs.

14. The booster actuator as defined in claim 11, further comprising: an electrical coil surrounding the force input member, such that a change in electrical energy to the coil moves the force input member to the activated input position.

15 15. The booster actuator as defined in claim 11, wherein each of the input end and

output end of the linking member is provided with a roller for engaging the force input member and force output member, respectively.

16. A booster actuator for receiving a low energy input from an electrically activated device and outputting a high energy to activate a release of pressurized gas to a hazard area, the booster comprising:

a body having a force receiving input end and force delivery output end;

a force input member linearly movable relative to the body in response to the low energy force input from an initial input position to an activated input position;

a force output member linearly movable relative to the body in response to movement of the force input member from an initial output position to an activated output position;

a first biasing member for biasing the force output member to the activated output position;

a second biasing member for biasing the output force member to the activated output position;

a plurality of linking members each between the force input member and the force output member and pivotally movable relative to the body from an engaged position for retaining the force output member in the initial output position to a disengaged position for releasing the force output member to the activated output position, the linking members being circumferentially arranged about the force input member and the force output member

and each having an input end engaging the force input member and an output end engaging the force output member; and the force output member includes an output member recess for receiving a lower end of each of the linking members when in the engaged position.

17. The booster actuator as defined in claim 16, wherein the force input member
5 includes an input member recess for receiving an upper end of the linking member when in the disengaged position, thereby allowing disengagement of the lower end of the linking member from the output member recess.

18. The booster actuator as defined in claim 16, wherein a central axis of the force input member is substantially aligned with a central axis of the force output member.

10 19. The booster actuator as defined in claim 16, further comprising: the second biasing member comprises a plurality of disk springs.

20. The booster actuator as defined in claim 16, wherein the force delivery output
end of the body includes threads, and a reset member threaded to the delivery output end is
rotated relative to the body to engage the force output member to move the force output
15 member from the activated position to the initial position.